

Applicant : Michael I. Chia  
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#### REMARKS

Claims 1-21 have been cancelled, and new claims 23-32 have been added. Accordingly, upon entry of the above amendments, claims 22-32 will be pending and under consideration in the above-identified application.

#### Rejection Under 35 U.S.C. §112, First Paragraph

Claims 1-21 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner has taken the position that inconsistencies in the definitions of range rate have caused considerable confusion, such that the claims have not reasonably conveyed to the person of ordinary skill in the art that the Applicant had possession of the claimed invention.

This rejection has been overcome and/or obviated by cancellation of rejected claims 1-21.

#### Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 1-21 also stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite.

This rejection has been overcome and/or obviated by cancellation of rejected claims 1-21.

#### New Claims

Applicant acknowledges that there has been considerable confusion as to the scope and meaning of cancelled claims 1-21, and that alternative definitions in the specification for the measured range may have contributed to this confusion. However, it is also believed that some confusion may have occurred because the invention has not been fully appreciated.

As an initial matter, an undesirable characteristic of range measuring sensors that are commonly employed in vehicles to provide information for adaptive cruise control systems is that the range sensors tend to shift from measuring the distance from the rear of a leading truck to a trailing vehicle hosting the adaptive cruise control system toward measuring the distance from the rear axle of the truck to the trailing vehicle. This means that as the trailing vehicle

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gets closer to the rear of the truck, the apparent or sensed distance or range between the vehicles can actually appear to increase rather than decrease. This undesirable characteristic of the range sensors does not occur with automobiles, pickup trucks, vans, or most other vehicles. It typically occurs only with trucks pulling a semi-trailer.

The invention employs this apparent undesirable characteristic as an advantage by simultaneously measuring the range rate between the vehicles (i.e., the relative velocity of one vehicle with respect to another), while taking successive range measurements, and making an appropriate adjustment when there are inconsistencies among the measurements. When successive measurements of the range indicate that the lead vehicle is pulling away (i.e., the distance between the vehicles is increasing), while the range rate indicates that the trailing vehicle is closing on the lead vehicle, then the adaptive cruise control system recognizes this inconsistency as being indicative of range measurements being taken from the rear axle of a semi-trailer rather than the rear of the semi-trailer, and makes an appropriate adjustment by subtracting from the measured range the typical distance between the rear and rear axle of a semi-trailer (about 5 meters or about 16 feet).

In order to overcome the previous bases for rejection of claims 1-21 under 35 U.S.C. §112, first and second paragraphs, new claims 23-32 have been written to claim methods and automotive systems for providing close range truck detection and making appropriate adjustments when the apparent difference between successive range measurements indicates that a target is pulling away from the trailing vehicle, while the measured range rate suggests that the trailing vehicle is closing on the target vehicle.

It is believed that new claims 23-32 embrace subject matter that is in compliance with 35 U.S.C. §112, first and second paragraphs, and which is neither anticipated nor obvious based on the prior art.

#### Allowable Subject Matter

Applicant acknowledges that claim 22 has been allowed.

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CONCLUSION

In view of the above amendments and remarks, is it respectfully submitted that the application is in condition for allowance and notice of the same is earnestly solicited.

Respectfully submitted,

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